

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Currently Amended)

A process for granulating slag from a blast furnace or a smelting reduction plant, comprising:

feeding a granule/water mixture that was formed during granulation and combustion flue gas including H₂S-containing vapors to a granulation tank and then to a dewatering installation, and dewatering the slag granules in the dewatering installation;

at least partially condensing the H₂S-containing vapors and gases formed during the granulation by injecting water in a condensation space which is flow-connected to the granulation tank, the water injection being at a water injection point;

discharging H₂S-containing residual gases from the condensation space below the water injection point, and burning H₂S from the condensation space; and

after the residual gases have been discharged from the condensation space, passing the residual gases in countercurrent through a hot slag channel, thereby burning H₂S to form SO₂.

Claim 2 (Previously Presented)

The process as claimed in Claim 1, further comprising the burning of the H₂S is in a combustion chamber.

Claim 3 (Canceled)

Claim 4 (Currently Amended)

The process as claimed in claim 1, further comprising cooling the combustion flue gas with water, and precipitating the SO₂ formed from the H₂S-containing vapors.

Claim 5 (Previously Presented)

The process as claimed in claim 1, further comprising partitioning off the granulation tank in a gastight manner from the dewatering installation.

Claim 6 (Previously Presented)

The process as claimed in claim 1, further comprising setting a superatmospheric pressure in the granulation tank and in the condensation space below the water injection point.

Claim 7 (Previously Presented)

The process as claimed in claim 1, further comprising passing vapors and gases formed in the dewatering installation into the condensation space above the water injection point.

Claim 8 (Previously Presented)

The process as claimed in Claim 7, further comprising setting a subatmospheric pressure in the condensation space above the water injection point.

Claim 9 (Previously Presented)

The process as claimed in claim 7, further comprising controlling the quantity of vapor and gas passed into the condensation space by a sucking action by means of the quantity of water injected so that the quantity of vapor and gas is kept at a minimum.

Claim 10 (Previously Presented)

The process as claimed in claim 1, further comprising discharging condensate formed in the condensation space and injected water from the condensation space and feeding the discharged condensate to the water which has been separated off in the dewatering installation and recirculating the condensate for granulation and water injection.

Claim 11 (Previously Presented)

The process as claimed in claim 1, further comprising controlling the quantity of injected water as a function of the slag rate.

Claim 12 (Previously Presented)

An installation for granulating slag from a blast furnace or a smelting reduction plant, comprising

a granulation device, a slag channel for delivering the slag to the granulation device, a downstream granulation tank downstream from the granulation device for holding a granule/water mixture, a condensation device, which is flow-connected to the granulation tank a water feed including a device for injecting water into the condensation device, and a subsequent granule dewatering installation,

a discharge line from the condensation device for discharging vapors and gases a combustion chamber pipe-connected to the discharge line and provided in the condensation device connected below the device for injecting water.

Claim 13 (Previously Presented)

An installation for granulating slag, a blast furnace or a smelting reduction plant, comprising

a granulation device, a slag channel delivering the slag to the granulation device, an extractor hood over the slag channel, for a downstream granulation tank for holding a granule/water mixture, a condensation device, which is flow-connected to the granulation tank a water feed including a device for injecting water into the condensation device, and a subsequent granule dewatering installation,

a discharge line from the condensation device for discharging vapors and gases, the discharge line opening out into the slag channel between the granulation device and the extractor hood, the discharge line is provided in the condensation device connected below the device for injecting water.

Claim 14 (Previously Presented)

The installation as claimed in Claim 12, further comprising a water cooler for the combustion flue gases provided downstream of the combustion chamber.

Claim 15 (Previously Presented)

The installation as claimed in Claim 13, wherein the slag channel further comprises a burner for generating an ancillary flame.

Claim 16 (Previously Presented)

The installation as claimed in claim 12, wherein the granule dewatering installation comprises at least one dewatering device and a water basin, which are provided with a covering hood and a discharge line for discharging vapors and gases, which opens out in the condensation device above the device for injecting water, the discharge line leads away from the covering hood.

Claim 17 (Previously Presented)

The installation as claimed in claim 12, further comprising a gas barrier between the granulation tank and the granule dewatering installation.

Claim 18 (Previously Presented)

The installation as claimed in claim 12, further comprising a device operable for trapping water and condensate and disposed in the condensation device below the device for the injection of water, a discharge line from the device opens out into the granule dewatering device.

Claim 19 (Previously Presented)

The installation as claimed in claim 12, wherein the granule dewatering installation is pipe-connected to the water feed of the condensation device or the granulation device.

Claim 20 (Previously Presented)

The process as claimed in claim 3, wherein the H₂S is burned with heat being supplied by means of an ancillary flame.

Claim 21 (Previously Presented)

The installation as claimed in Claim 13, further comprising a water cooler for the combustion flue gases provided downstream of the combustion chamber.

Claim 22 (Previously Presented)

The installation as claimed in claim 13, wherein the granule dewatering installation comprises at least one dewatering device and a water basin, which are provided with a covering

hood and a discharge line for discharging vapors and gases, which opens out in the condensation device above the device for injecting water, the discharge line leads away from the covering hood.

Claim 23 (Previously Presented)

The installation as claimed in claim 13, further comprising a gas barrier between the granulation tank and the granule dewatering installation.

Claim 24 (Previously Presented)

The installation as claimed in claim 13, further comprising a device operable for trapping water and condensate and disposed in the condensation device below the device for the injection of water, a discharge line from the device opens out into the granule dewatering device.

Claim 25 (Previously Presented)

The installation as claimed in claim 13, wherein the granule dewatering installation is pipe-connected to the water feed of the condensation device or the granulation device.